FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
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JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15/ **Date: 18-06-2014**

1. TESTING OF FINE AGGREGATES :

Sub: Testing of Fine Aggregates.
{Project*: Improvements to Roads and Drains at Ashwathanagara in Ward No.06, Byatarayanapura Sub-Division}

Ref.: Letter No. AEE/BPSD/BBMP/22/2014-15, dated 13-06-2014

Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division.
BBMP, Bangalore.

Name of the Contractor/Agency*: Sri.V.Chandrappa, Contractor, Bangalore.

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2007) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	97.30	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	84.00	60-95	75-100	85-100	
01.18	76.00	30-70	55-90	75-100	
600. mic	44.10	15-34	35-59	60-79	
300.mic	18.90	5-20	8-30	12-40	
150.mic	3.00	0-10	0-10	0-10	

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	Requirements as Per IS. Specification IS :383-1970 (Reaffirmed 2007)
1	Silt Content	001	1.46%	Not more than 8%
2.	Specific Gravity	----	2.62	-------

* As furnished by Client.
The Results relate only to the items tested.

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18/06/2014
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BUB/CTE/2014-15/ **Date: 18-06-2014**

1. TESTING OF COARSE AGGREGATES (40 mm):

Sub: Testing of Coarse Aggregates.
{Project*: Improvements to Roads and Drains at Ashwathanagara in Ward No.06, Byatarayanapura Sub-Division}
Ref.: Letter No. AEE/BPSD/BBMP/22/2014-15, dated 13-06-2014
Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division.
BBMP, Bangalore.
Name of the Contractor/Agency*: Sri.V.Chandrappa, Contractor, Bangalore.

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
	40 mm Sample	*Single size*	*Graded*
40mm	96.00	85-100	95 – 100
20mm	66.50	0 -20	30- 70
10mm	28.00	0 -5	10- 35
4.75mm	Nil	------	0 - 5

TABLE 1 2 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1.	Flakiness Index	As above	14.70 %	Not to exceed 25 %
2.	Crushing value	----,,----	26.50%	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

* As furnished by Client.
The Results relate only to the items tested.

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BUB/CTE/2014-15/ **Date: 23-06-2014**

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements to Roads and Drains at Ashwathanagara in Ward No.06, Byatarayanapura Sub-Division}

Ref.: Letter No. AEE/BPSD/BBMP/22/2014-15, dated 13-06-2014

Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division.
BBMP, Bangalore.

Name of the Contractor/Agency*: Sri.V.Chandrappa, Contractor, Bangalore.

PHYSICAL TESTS ON CEMENT

Brand* : Birla
Grade * : 53
Type * : OPC
Date : 14-06-2014to 21-06-2014

SL No	Name of Test	Results	Requirements as per IS 12269-1987
		Cement Sample	
1	Initial setting time	**160 min**	Shall not be less than 30 min
2	Final setting time	**250min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**2.50%**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**1.70 mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results) b) 7 days (average of three results)	**29.00 N/ Sq mm** **41.00 N/Sq mm**	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

* As furnished by Client.
The Results relate only to the items tested.

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BUB/CTE/2014-15/ **Date: 18-06-2014**

1. TEST REPORT ON REINFORCEMENT STEEL:

Sub: Testing of Reinforcement Steel of diameter 10mm.
{Project*: Improvements to Roads and Drains at Ashwathanagara in Ward No.06, Byatarayanapura Sub-Division}
Ref.: Letter No. AEE/BPSD/BBMP/22/2014-15, dated 13-06-2014
Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division.
BBMP, Bangalore.
Name of the Contractor/Agency*: Sri.V.Chandrappa, Contractor, Bangalore.

TABLE – 1

SL No	Details	For 10mm	
		Test Results	Min Req as per IS 1786-2008
01	Observed diameter of bar	**10.0mm**	10.0mm
02	Observed Wt/m Length **Kg/m**	**0.620**	0.567
03	Proof stress/Yield stress, fy , **N/mm^2**	**554.0**	500.0
04	Bend/ Re bend Test	**Ok**	---
05	Percentage of Elongation, %	**20.30**	12.00
06	Ultimate Tensile Strength **N/mm^2**	**614.0**	545.0

*As furnished by Client.
The Results relate only to the items tested.

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BUB/CTE/2015-16/

DATE: 22-07-2014

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (28 days Compressive Strength)
{Project*: Improvements to Roads and Drains at Ashwathanagara in Ward No.06, Byatarayanapura Sub-Division}

Ref.: Letter No. AEE/BPSD/BBMP/22/2014-15, dated 21-07-2014

Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division.
BBMP, Bangalore.

Name of the Contractor/Agency*: Sri.V.Chandrappa, Contractor, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1 :

Sl No	Location/ Identification *	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	23-06-14	21-07-14	28	22500	530	23.33	**23.70**
	002	"	"	"	"	535	23.77	
	003	"	"	"	"	540	24.00	

* As furnished by Client.
The Results relate only to the items tested.

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BUB/CTE/2014-15/ Date: 09-08-2014

TEST REPORT ON WET MIX MACADAM MIX
(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Project*: Improvements to Roads and Drains at Ashwathanagara in Ward No.06, Byatarayanapura Sub-Division}

Ref.: Letter No. AEE/BPSD/BBMP/22/2014-15, dated 07-08-2014

Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division.
BBMP, Bangalore.

Name of the Contractor/Agency*: Sri.V.Chandrappa, Contractor, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, IV Revision-2001
53.00	**100.00**	100
45.00	**96.80**	95-100
26.50	---	-
22.40	**70.00**	60-80
11.20	**41.50**	40-60
4.75	**32.00**	25-40
2.36	**22.60**	15-30
0.600	**17.50**	8-22
0.075	**4.50**	0-8

TABLE 1 2 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1	Flakiness & Elongation Index	01	**25.40%**	Not more than 30 %
2	Impact Value	----,,----	**26.30 %**	Not more then 24.00 % for BC Not more then 27.00 % for DBM Not more then 30.00 % for BM/WMM

*As Furnished by Client

The Results relate only to the items tested.

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BUB/CTE/2014-15/ Date: 23-08-2014

TEST REPORT ON BITUMINOUS MIXES
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: Testing of Bitumen Premix Sample (Semi Dense Bituminous Concrete-SDBC).
{Project*: Improvements to Roads and Drains at Ashwathanagara in Ward No.06, Byatarayanapura Sub-Division}

Ref.: Letter No. AEE/BPSD/BBMP/22/2014-15, dated 20-08-2014

Sample supplied to lab by: Assistant Executive Engineer,
Byatarayanapura Sub-Division.
BBMP, Bangalore.

Name of the Contractor/Agency*: Sri.V.Chandrappa, Contractor, Bangalore.

TEST RESULTS:

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.08%**
2. **Gradation Test** :

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-15 of MORTH Specifications-2001 (Grading – 2)
13.2	**100**	100
9.5	**96.00**	90—100
4.75	**47.80**	35—51
2.36	**28.00**	24—39
1.18	**19.60**	15—30
0.3	**12.60**	09—19
0.075	**4.00**	03—08

*As Furnished by Client

The Results relate only to the items tested.

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Date: 23-08-2014

TABLE 12 :

SL No	Test conducted	Sample No	Results	**Requirements** as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1	Flakiness & Elongation Index	01	**24.00%**	Not more than 30 %
2	Impact Value	----,,----	**25.30 %**	Not more then 24.00 % for BC Not more then 27.00 % for DBM Not more then 30.00 % for BM/WMM
3	Water absorption	----,,----	**0.40%**	Not more than 1.0 %
4	Stripping test. (Coating and stripping of Bitumen aggregate mixtures)	----,,----	**98.00 %**	Minimum retained coating 95.0 **%**

*As Furnished by Client

The Results relate only to the items tested.

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